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I. AMENDMENTS

In the Claims:

Please cancel, without prejudice or disclaimer, claims 35 to 46. Please amend claims 47, 48 and 55 to 59, as shown below be deleting the stricken-through material and inserting the underlined material as follows:

35. (Currently Canceled) ~~A method for the treatment of a cancer in a subject, the method comprising:~~

~~(a) determining a genomic polymorphism in the subject with said cancer;~~

~~(b) selecting a chemotherapeutic drug to administer to said subject to treat said cancer depending on the type of genomic polymorphism determined in step (a); and~~

~~(c) administering said chemotherapeutic drug to said subject,~~

~~wherein the cancer is a cancer selected from the group consisting of breast cancer, colorectal cancer, gastric cancer, esophageal cancer, Burkitt's lymphoma, B follicular cell lymphoma and small cell lung carcinoma.~~

36. (Currently Canceled) ~~The method of claim 35 wherein the cancer is colorectal cancer.~~

37. (Currently Canceled) ~~The method of claim 35 wherein determining the genomic polymorphism of the subject comprises determining the subject's genotype at a tandemly repeated 28 base pair sequence in the thymidylate synthase (TS) gene's 5' untranslated region (UTR), wherein the genotype is homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence.~~

38. (Currently Canceled) ~~The method of claim 36 wherein the chemotherapeutic drug is a TS directed drug.~~

39. (Currently Canceled) ~~The method of claim 37 wherein the TS directed drug is a fluropyrimidine.~~

40. (Currently Canceled) ~~The method of claim 38 wherein the fluoropyrimidine is 5-fluorouracil.~~

41. (Currently Canceled) ~~The method of claim 39 wherein the subject is a human subject.~~

42. (Currently Canceled) ~~The method of claim 40 wherein determining the subject's genotype further comprises:~~

~~extracting genomic DNA from a biological sample of the subject;~~

~~amplifying the 5' UTR of the thymidylate synthase gene of said genomic DNA using polymerase chain reaction; and~~

~~analyzing the polymerase chain reaction product to determine the subject's genotype.~~

43. (Currently Canceled) ~~The method of claim 44 wherein analysis of the polymerase chain reaction product is performed using electrophoresis.~~

44. (Currently Canceled) ~~A method for the treatment of a cancer in a subject, the method comprising:~~

~~(a) determining the subject's genotype at a tandemly repeated 28 base pair sequence in the thymidylate synthase gene's 5' UTR, wherein the subject's genotype is homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence, and~~

~~(b) administering a TS-directed drug to the subject if the subject's genotype is homozygous for a double repeat of the tandemly repeated sequence,~~

~~wherein the cancer is a cancer selected from the group consisting of breast cancer, colorectal cancer, gastric cancer, esophageal cancer, Burkitt's lymphoma, B-follicular cell lymphoma and small cell lung carcinoma.~~

45. (Currently Canceled) ~~The method of claim 43 wherein determining the subject's genotype further comprises:~~

~~extracting genomic DNA from a biological sample of the subject;~~

~~amplifying the 5' UTR of the thymidylate synthase gene of said genomic DNA using polymerase chain reaction; and~~

~~analyzing the polymerase chain reaction product to determine the subject's genotype.~~

46. (Currently Canceled) ~~The method of claim 44 wherein analysis of the polymerase chain reaction product is performed using electrophoresis.~~

Please amend the following claims:

47. (Currently Amended) A method for ~~determining the suitability of treating a cancer in a subject using a chemotherapeutic drug, the method~~ screening cancer cells for sensitivity to a chemotherapeutic drug, comprising:

taking a biological sample of said cancer cells from a ~~the~~ subject; and

~~using the biological sample to determine~~ determining the genotype of a pre-selected gene of the cancer cells ~~subject~~, wherein said genotype determines the intratumoral expression of said gene, and correlating ~~wherein~~ said gene expression ~~determines the response of the subject~~ to said sensitivity to said chemotherapeutic drug.

48. (Currently Amended) The method of claim 47 wherein ~~the~~ said cancer cells are ~~is~~ colorectal cancer cells.

49. (Currently Amended) The method of claim 48 wherein ~~the~~ said pre-selected gene is thymidylate synthase gene.

50. (Previously Added) The method of claim 49 wherein determining the genotype comprises determining the subject's genotype at a tandemly repeated 28 base pair sequence in the thymidylate synthase (TS) gene's 5' untranslated region (UTR), wherein the genotype is homozygous for a triple repeat of the tandemly repeated sequence, heterozygous for a double repeat and a triple repeat of the tandemly repeated sequence, or homozygous for a double repeat of the tandemly repeated sequence.

51. (Previously Added) The method of claim 50 wherein the chemotherapeutic drug is a TS directed drug.

52. (Previously Added) The method of claim 51 wherein the TS directed drug is a fluropyrimidine.

53. (Previously Added) The method of claim 52 wherein the fluoropyrimidine is 5-fluorouracil.

54. (Previously Added) The method of claim 53 wherein the subject is a human subject.

55. (Currently Amended) The method of claim 54 wherein determining the subject's genotype ~~further~~ comprises:

~~extracting genomic DNA from a biological sample of the subject;~~

~~amplifying the~~ determining the genotype at the 5' UTR of the thymidylate synthase gene of said genomic DNA from said cell ~~using polymerase chain reaction; and~~

~~analyzing the polymerase chain reaction product to determine the subject's genotype~~.

56. (Currently Amended) The method of claim 55 wherein said determining the genotype is by analysis of the polymerase chain reaction product of the 5'UTR ~~is performed using electrophoresis~~.

57. (Currently Amended) A kit for use in screening for the effectiveness of TS directed drug therapy in human subjects, the kit comprising: means for determining a genomic polymorphism of the 5 'UTR of the TS gene; and instructions for correlating the genomic polymorphism of the 5' UTR of the TS gene to sensitivity to TS directed drug therapy ~~use of the kit~~.

58. (Currently Amended) The kit of claim 57 wherein the means for determining said genomic polymorphism ~~comprise:~~ all or some of the positive controls, negative controls, reagents, primers, sequencing markers, and probes for determining the presence or absence of a tandemly repeated 28 base-pair nucleic acid sequence that defines the genomic polymorphism in the 5' UTR of the TS gene ~~gen~~.

59. (Currently Amended) The kit of claim 58 wherein the kit components may be provided in solution or as a liquid dispersion ~~or the like~~.

60. (Previously Added) The kit of claim 58 comprising DNA tandemly repeated sequences that determine the type of genomic polymorphism of the TS gene in Tris-EDTA buffer solution kept at about 4°C.